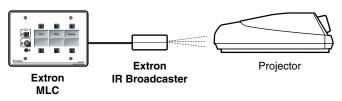
Extron® Electronics



User's Manual





IR Broadcaster

System Switcher and MediaLink Accessory

Introduction

The IR Broadcaster (part #60-272-02)

The Extron Infrared Broadcaster transmits IR signals that have been "learned" by an Extron system switcher or Extron MediaLink Controller (MLC) and that are associated with the front panel functions. This allows other IR controlled devices in the room to receive the signal put out by the Broadcaster. Refer to the appropriate switcher's or controller's user's manual for IR learning procedures.

Pressing buttons on the system switcher's or controller's front panel, or on an Extron IR remote control, SCP control pad, or RS-232 host causes the IR Broadcaster to broadcast an IR command that is associated with that button/key. For example, if a command to switch the projector to RGB mode has been "learned" and associated with an input selection button, when that button is selected from a panel, the IR remote control, or from the RS-232 host, that learned command is broadcast.

The switcher or the controller provides power, an IR signal, and a ground connection to the IR Broadcaster through a special three-conductor custom cable. The Broadcaster should be placed so that its signal covers a large area of the room, within the range of the projector or other devices to be controlled by learned commands.

Front and rear panels

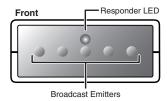
The picture below shows the front and rear panels of the IR Broadcaster. Place the dark red lens side (front) of the Broadcaster toward the room so that the projector (or other device) can receive the IR signals.

For some applications it may be desirable to limit the signal broadcast range. There is a connector on the IR Broadcaster for use with the

standard IR Emitter. If an Emitter is connected to the Broadcaster, the switcher or controller sends IR signals to controlled devices via the IR Emitter, but not out the Broadcaster's emitters.

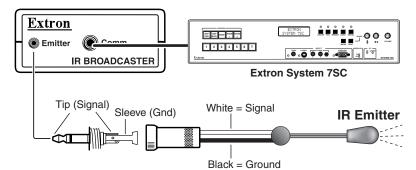
The IR Broadcaster's own emitter devices and the responder LED are shown in the illustration. The emitters are not easily seen through the dark lens, but the responder can be seen when its LED blinks to indicate that an IR signal has been broadcasted.





Installing and Setting Up the IR Broadcaster

The following illustration shows a typically appllication with an IR Broadcaster connected to a switcher, and it also shows how the IR Emitter can be used with the Broadcaster.



Connecting an IR Broadcaster, IR Emitter, and a system switcher

Using a signal with a carrier signal

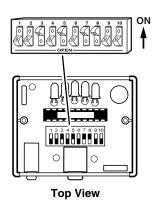
For most applications, a signal that already has a carrier frequency may be used with the IR Broadcaster. Use pin C from the System 5/5cr/5cr Plus or System 7SC connector, or pin A on the MLC (see diagrams on page 7), and use the IR Broadcaster's default DIP switch settings (switch 9 open) to allow the carrier signal to pass through and be broadcast. This leaves the signal/no carrier pin available for a projector that uses a wired remote control. The IR Emitter may not be used in this case.

Using a signal without a carrier signal

If you choose to have the IR Broadcaster generate the carrier signal, use pin A from the System 5/5cr/5cr Plus or System 7SC connector, or pin C on the MLC (see page 5). You may use an IR Emitter in this case.

If you use an IR Emitter, connect the white lined signal wire to the tip of the 2.5 mm plug (provided), as shown in the diagram above. Connect the solid black ground wire to the sleeve.

- Open the IR Broadcaster's case: remove and save the two small screws from the underside of the enclosure, and lift the top of the enclosure straight up.
- 2. Inside the Broadcaster, set DIP switch #9 to the closed position (up). This forces the Broadcaster to generate a carrier signal.
- 3. Set the other DIP switches to determine the carrier frequency. Page 3 features a table of all the possible carrier signal output frequencies that can be selected by setting the DIP switches. Choose a frequency from the table that is closest to that required by the projector (or other IR-controlled device).



IR Broadcaster with Emitter Port • Installation & Operation

Installation and Operation, cont'd

DIP Switch Settings for IR Broadcaster-Generated Carrier Frequencies																									
(DIP switch 9: closed. DIP switch 10: not used.)																									
Closed = up, ↑ Open = down, ↓ Freq.				Closed = up, ↑						Freq.	Closed = up, ↑					Freq.									
<u> </u>	•		_	_	-	_	(kHz)	L			1 =		_	_		(kHz)	Щ				_	wn	-	_	(kHz)
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↓ ↑	1	1	1	1	↑	1	6,700.00	*	1	1	+	1	+	†	1	319.00	*	1	1	1	+	1	+	1	163.40
↑ ↓	1	1	1	1	↑	1	4,466.70	1	+	1	+	1	+	†	1	311.60	1	+	1	1	+	†	+	1	161.40
+ +	1	↑	1	†	↑	1	3,350.00	1	+	†	+	†	1	†	+	304.55	1	1	+	†	+	†	1	+	159.53 159.50
† †	1	↑	†	†	↑	+	3,350.00	*	+	1	+	↑	+	†	<u>†</u>	304.50 297.80	+	+	†	†	+	↑	+	†	157.60
↑ ↑	+	†	†	†	↑	†	2,680.00	<u>↑</u>	†	+	+	†	↓	†	† †	291.30	↑ ↓	<u>†</u>	+	†	+	↑	+	† †	155.80
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1 ↑	1	+	1	1	1	1	1,340.00	╁	1	1	†	+	+	1	+	268.00	+	1	†	+	+	†	+	<u>+</u>	148.90
<u> </u>	1	+	1	<u>+</u>	1	1	1,218.20	Ť	+	<u>†</u>	<u>+</u>	+	Ť	<u>†</u>	÷	262.70	Ť	+	<u>+</u>	+	+	<u>+</u>	+	<u>†</u>	147.30
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↓ ↑	+	+	1	1	†	1	957.10	Ť	1	+	†	+	+	<u>+</u>	<u>+</u>	248.10	¥	†	+	+	+	†	+	<u>+</u>	142.60
↑ ↓	+	+	1	1	1	1	893.30	1	+	+	<u>+</u>	+	+	<u>+</u>	<u>+</u>	243.60	<u>†</u>	+	+	+	+	<u>+</u>	+	Ť	141.10
+ +	+	+	1	1	1	1	837.50	ŧ	+	+	1	+	+	†	1	239.30	¥	+	+	+	+	†	+	1	139.60
+ +	1	†	+	+	+	+	837.50	¥	1	+	+	+	+	†	+	239.28	¥	¥	¥	+	¥	+	†	+	139.58
† †	1	†	+	+	†	†	788.20	4	1	1	¥	+	+	†	1	235.10	†	†	†	+	†	+	+	1	138.10
↓ ↑	1	†	+	1	†	1	744.40	¥	†	1	+	+	+	†	†	231.00	¥	†	†	+	†	+	+	1	136.70
↑ ↓	1	1	+	1	+	1	705.30	Ŷ	+	1	+	+	+	Ť	1	227.10	†	¥	1	+	†	+	+	+	135.40
+ +	1	†	+	1	+	1	670.00	4	+	+	¥	+	+	†	+	223.33	¥	¥	+	+	†	+	+	+	134.00
† †	+	†	†	1	+	+	670.00	¥	+	+	+	+	+	†	1	223.30	†	†	+	+	+	†	1	+	134.00
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† †	+	†	¥	†	†	†	638.10	Ŷ	†	+	+	¥	¥	Ť	†	219.70	†	†	¥	†	†	¥	¥	†	132.70
↓ ↑	+	1	+	1	1	1	609.10	¥	†	+	+	+	¥	Ť	†	216.10	¥	†	+	1	Ť	+	+	1	131.40
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† †	1	+	+	1	1	1	536.00	1	1	1	1	1	1	¥	1	206.20	1	†	1	+	†	+	+	1	127.60
↓ ↑	1	¥	¥	1	†	1	515.40	¥	1	1	†	1	1	¥	1	203.00	¥	†	1	+	†	¥	¥	1	126.40
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↑ ↓	+	1	1	1	†	¥	478.58	1	1	1	†	¥	1	1	¥	197.05	1	¥	1	+	¥	†	1	¥	124.08
† †	+	+	+	1	1	1	462.10	1	1	+	1	1	1	+	1	194.20	†	1	+	+	1	+	+	1	122.90
↓ ↑	+	+	+	1	1	1	446.70	+	1	+	1	1	1	+	1	191.40	¥	1	+	+	1	+	+	1	121.80
↑ ↓	+	+	+	1	†	1	432.30	<u>†</u>	+	+	†	1	1	+	1	188.70	<u>†</u>	+	+	+	†	+	+	1	120.70
+ +	+	+	+	1	1	1	418.80	*	+	+	1	1	1	+	<u>†</u>	186.10	¥	+	1	+	+	†	1	+	119.65
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♦ ↑	+ -		†			_	394.10	*	_	1		1			†	181.10	*	1	1		+		*	1	117.50
↑ ↓	1	1	1	+	↑	1	382.90	1	+	-	+	1	1	+	<u>†</u>	178.70	1	+	1	1	+	+	+	1	116.50
† †	1	+	1	1	↑	+	372.23	Ļ	+	-		+	1	1	+	176.33	1	1	+	+	_	1	1	+	115.53
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↓ ↑	+	↑		+		†	352.60	†	1	-		†	†	+	†	171.80	+	† -	+	†	_	+	+	†	113.60
↑ ↓	+	↑	†	+	↑	†	343.60	Ļ	+	+	+	†	†	+	†	169.60	1	+	+	†	_	+	+	1	112.60
↓ ↓	+	1	†	+	↑	1	335.00	+	∓	-	+	1	1	+	<u>†</u>	167.50	+	+	+	1	±	+	+	<u>†</u>	111.70
↓ ↑	1	¥	1	1	1	¥	335.00	¥	¥	1	1	¥	1	†	¥	167.50	¥	1	¥	¥	¥	1	1	+	111.68

1 1	Freq. (kHz) \$ 35.28 \$ 34.90 \$ 34.53 \$ 33.85
1 2 3 4 5 6 7 8	8 ↓ 35.28 ↓ 34.90 ↓ 34.53 ↓ 34.18 ↓ 33.85
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1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 8 1 2 3 4 5	 ↓ 34.53 ↓ 34.18 ↓ 33.85
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1 1	→ 33.18
1 1	→ 32.85
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	→ 27.93
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\(\frac{1}{1}\) \(\frac{1}\) \(\frac{1}\	↓ 27.45
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\[\daggregarrightarrow\ \daggregarrow\ \daggregarrightarrow\ \daggregarrow\ \	♦ 27.23
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↑ ↑ ↑ ↓ ↓ ↓ ↑ ↓ 58.78 ↑ ↑ ↓ ↓ ↑ ↓ 36.03	₹ 26.18
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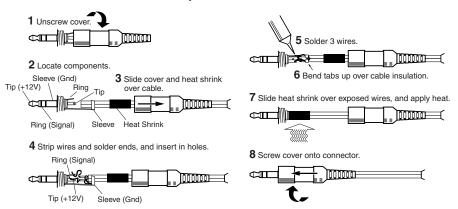
Making the Cable

Extron provides the 3.5 mm connectors with the IR Broadcaster, however a cable will have to be made to fit your installation requirements. Use the following information to make the cable.

Installation and Operation

Wiring tip-ring-sleeve and tip-sleeve connectors

The illustration below shows how to wire a 3.5 mm stereo-style (tipring-sleeve) connector for the IR Broadcaster voltage, signal, and ground wires to connect the System Switcher or MLC to the IR Broadcaster.



Wiring the tip-ring-sleeve connector

The contact assignments for the connector are as follows:

Stereo connector part	Function	System 5 <i>cr</i> /5 <i>cr</i> Plus, System 7SC captive screw connector pin	MLC captive screw connector pin
Tip	+12 volts	E	E
Ring	Signal & carrier	С	A
Sleeve	Ground	B or D	D

CAUTION

Because there will be +12 volts on the tip (from the switcher or the MLC) it is best to plug the cable to the IR Broadcaster first, and then into the switcher's or MLC's panel.

NOTE

If the projector has round jack marked 'Wired Remote', this may be wired to pin A. Check the documentation that came with the projector to be sure of this function.

If using the standard IR Emitter with the IR Broadcaster, a similar procedure is required to put a 2.5 mm, round, tip-sleeve connector on the Emitter's cable. See the illustration on page two for IR Emitter wiring instructions. The Broadcaster's internal DIP switches must also be set to select the outgoing carrier frequency.

NOTE

A 12VDC, 500 mA output is provided on the Comm port of the System 5/System 5cr/System 5cr Plus, the IR Comm port of the System 7SC, and the Display/Source Control IR port of the MLC.

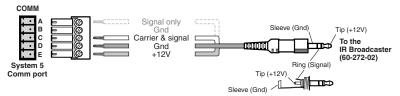
For the end of the cable that goes to the switcher or MLC, connect the wires to the 3.5 mm, 5-pole captive screw connector. Strip no more than

1/4" (0.6 cm) of insulation from each wire. Do not solder the tips. Insert each wire into the correct position on the captive screw connector, and tighten each screw. See the diagrams below.

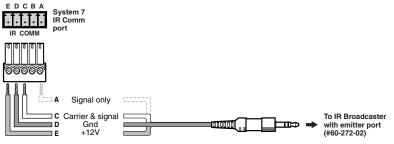
NOTE

To pass through an IR signal that includes a carrier signal, connect the signal wire to the pin designated for carrier and signal.

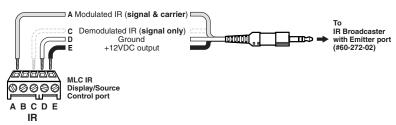
If you want the IR Broadcaster to generate the carrier signal, connect the signal wire to the pin designated for signal only.



Wiring the System 5/5cr/5cr Plus' captive screw connector



Wiring the System 7SC's captive screw connector



Wiring the MLC's one-piece captive screw connector

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Extron's Warranty

Extron Electronics warrants this product against defects in materials and workmanship for a period of three years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Extron Electronics will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to:

USA, Canada, South America, and Central America:

Extron Electronics 1230 South Lewis Street Anaheim, CA 92805, USA

Asia:

Extron Electronics, Asia 135 Joo Seng Road, #04-01 PM Industrial Bldg. Singapore 368363

Europe, Africa, and the Middle East:

Extron Electronics, Europe Beeldschermweg 6C 3821 AH Amersfoort The Netherlands

Japan:

Extron Electronics, Japan Daisan DMJ Bldg. 6F, 3-9-1 Kudan Minami Chiyoda-ku, Tokyo 102-0074 Japan

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, abnormal operating conditions or non-Extron authorized modification to the product.

If it has been determined that the product is defective, please call Extron and ask for an Applications Engineer at (714) 491-1500 (USA), 31.33.453.4040 (Europe), 65.6383.4400 (Asia), or 81.3.3511.7655 (Japan) to receive an RA# (Return Authorization number). This will begin the repair process as quickly as possible.

Units must be returned insured, with shipping charges prepaid. If not insured, you assume the risk of loss or damage during shipment. Returned units must include the serial number and a description of the problem, as well as the name of the person to contact in case there are any questions.

Extron Electronics makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Extron Electronics be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron Electronics has been advised of such damage.

Please note that laws vary from state to state and country to country, and that some provisions of this warranty may not apply to you.



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